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ABSTRACT

What is the nature of value and how can one identify the value claims made in evaluation documents? What is the proper philosophic basis for the treatment of values in evaluation? These and related concerns are addressed in this report. It is suggested that evaluation documents have a structure of claims or a conceptual design, and that, by means of philosophic analysis the philosophical assumptions may be revealed and the philosophical grounds for evaluation understood. Part 1 provides a systematic method for analysis of claim structures. The method is QUEMAC Value. QUEMAC is an acronym of six elements related to evaluation documents: question; unquestioned assumptions; event/object; method; answer/claims; concept/conceptual structures. The method and the associated technique of concept mapping are shown to be valuable in the construction of a document's philosophy and as aids to reveal the source and meaning of criteria of excellence. A Headstart program evaluation document is analyzed to illustrate the method. Philosophic questions growing from concern with the key concept of value are probed in Part II. Specific issues dealt with are: utilitarianism and evaluation; educational value; the distinction between "value" and "having values"; and the virtue/function claim. (Author/AEF)

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THE EVALUATION DOCUMENT: PHILOSOPHIC STRUCTURE

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PREFACE

The Research on Evaluation Program is a Northwest Regional Educational Laboratory project of research, development, testing, and training designed to create new evaluation methodologies for use in education. This document is one of a series of papers and reports produced by program staff, visiting scholars, adjunct scholars, and project collaborators--all members of a cooperative network of colleagues working on the development of new methodologies.

What is the nature of value and how can one identify the value claims made in evaluation documents? What is the proper philosophic basis for the treatment of values in evaluation? These and related concerns are addressed in this report by D. Bob Gowin and Thomas Green. These two educational philosophers provide a procedure for analyzing the value claims made by evaluators and address such questions as "What is educational value?" and "What is the distinction between valuing and having values?"

Nick L. Smith, Editor
Paper and Report Series

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THE EVALUATION DOCUMENT: PHILOSOPHIC STRUCTURE

Part I:
Constructing the Philosophy in an Evaluation Document

Introduction

Evaluation documents have a structure. In fact, they have many ditferent structures. As products of human effort, they take different forms to serve different purposes. Some documents are used to help clients, some are used to obtain funding, others are distributed to a network of evaluation specialists. Take a selection of any number of evaluation documents and you will find they are put together in a variety of ways, they have different structures. By structure in this context we mean only the parts of the document in relation to other parts which together constitute the whole. Structure is simply parts-and-their-relations. In particular, we believe that evaluation documents have a philosophic structure, a structure of a special kind. That structure is a structure of claims. Through philosophic analysis we make this structure of claims explicit and we reveal philosophical assumptions. When we come to understand the philosophic structure of evaluation documents we come to understand the philosophical grounds for evaluation.

We are not trying to write a philosophy of evaluation as one might write a philosophy of science or education or art. We are writing this monograph to achieve two basic aims. First, we will provide the reader with a systematic method to use in analyzing the structure of claims found in evaluation documents. From the use of this method of analysis one may expect to be able to construct the philosophy found in the evaluation document. This

construction should be immediately useful in two ways. It should help in the analysis of completed studies and in the creation of new studies. Further, it should help to show the source and meaning of the criteria of excellence used in judging existing studies and in guiding the development of new studies. The method and its use on a clear case of evaluation (Head Start) constitute Part I of this work.

In Part II, "Further Questions About Value", we go beyond the results of an analysis of a document to probe more deeply for philosophic questions growing out of concern with the key concept for evaluation, value. We discuss a view of classical utilitarianism as a basis for evaluation practice. Next, we take up the difficult issue of educational value. We believe that educational evaluation should relate to the value of education. Next, we extend the discussion to make a very important distinction between value and "having values". We end with another value question, found in the tradition of Aristotle's views on excellence.

The Method of Analysis: QUEMAC Value

Evaluation is defined as the assessment of worth, the determination of merit, the appraisal of value. Value is the key concept in evaluation. Yet it is surprising how infrequently the concept of value is discussed in evaluation studies. QUEMAC Value concerns value. It is a method we use to analyze and critique the structure of claims found in evaluation documents. QUEMAC is an acronym of six elements related to questions we can ask of any evaluation study. These questions, when answered, give us a sense of the whole structure of claims in the evaluation study. This structure is the pattern of concepts showing what has to be thought about to make sense of the evaluation. Perhaps we could call it the "conceptual design" in order to distinguish it from the usual concern of methodology for design devoted to establishing matters of fact (data, variables, measurements, etc.).

The letters of QUEMAC stand for the following:

Q	stands for	Questions
U	stands for	Unattended Assumptions
E	stands for	Events of Interest
M	stands for	Method of Work
A	stands for	Answers to Questions
C	stands for	Concepts

By centering on value questions, we also find ways of making sense of evaluation work. We have found it useful to look for the following five forms of value questions and value claims.

Intrinsic value claim	1) Is this X any good?
Instrumental value claim	2) What is it good for?
Comparative Claim	3) Is it better than something else?
Idealization claim	4) Can we make it better?
Decision claim	5) Ought we to choose it?

Almost all of the value claims evaluators are concerned with take one of these five forms. Notice that three main ideas have already been presented. First, we are going to present a method of analysis. That method consists of asking and answering the questions of QUEMAC. Secondly, we are going to show that the method of analysis reveals the structure of claims in the evaluation document. Thirdly, notice that this method of working will get us to the concept of value.

Starting Points and Assumptions

We begin an analysis by supposing that anyone interested in evaluation can find a clear case of an evaluation document. Take some evaluation study you are familiar with and put it on the table in front of you. The clear case we use is an evaluation of Head Start. The first move in the analysis is to decide to locate (or infer) the important question of the study and the main answer

given in the study. The relation between questions asked and answers given is a key useful in unlocking the structure of any evaluation study. (See a later part of this monograph for the worked out example of the Head Start evaluation.)

Notice already what we have assumed:

1. We assume that you can recognize a clear case of evaluation. This presupposes criteria you use to separate a clear from a mixed case or phony case. Knowing what counts as an evaluation probably can commit you to a point of view about evaluation. And any point of view presupposes a context in which that viewpoint is meaningful.

2. We assume an evaluation study generates a document (a deliverable) that you can put your hand on and put it on the table, i.e., that a document is a material thing that takes up space and doesn't disappear rapidly in time. Evaluations that result in conversations (e.g., between a principal and a teacher or a teacher and a parent or pupil) do not leave a material record that can be put on a table.

3. We assume in some evaluations no clear question is explicit. Answers are given as facts and data are presented to the reader to find the questions. The reader then has to realize that answers can be converted into questions. Let us now go to an overview of QUEMAC.

Overview of QUEMAC

Q Question: What is the significant, telling question (TQ) of the study? Distinguish telling from technical questions; telling questions "tell on" the context assumed or made explicit by the study. (See Note A for more discussion of TQ's)

U Unquestioned Assumptions: Identify assumptions taken for granted by the workers of the study. These assumptions, too, will be related to the context in which the study was conducted.

E Event/Object: Describe briefly the main event: is it a program? personnel? product (e.g., an object such as a textbook)? What is the evaluation study about, what are its characteristic phenomena of interest? Provide a succinct statement of what was inquired into. A process is an event.

M Method: A method is a procedural commitment. We use methods to get answers to our questions. We want our methods to have certain features (e.g., reliability) and studies in research design and methodology generally are studies of the most desirable features of methods of work. Recent studies in alternative methods of evaluation are producing a much greater variety of approaches than were thought about heretofore. A question of method is a "How" question; those skilled in methods and methodology are said to have "know how".

Philosophic studies also use a set of methods to answer philosophic questions. These methods of analysis are very different from standard research methods. We characterize the difference briefly in this way: philosophic methods deal with concepts where research deals with facts. Philosophy concerns concept analysis, not data analysis. Empirical method describes the ways records were made. Judge to see if the records were made of the key events or happenings of the program. Record-making and record-keeping are primary concerns of systematic method.

Data are transformed facts, that is, judgments based on principles of measurement, statistics, design, etc. Data when transformed are taken as evidence to back knowledge claims. [The primary knowledge claim is a causal statement. Causal links are extremely rare and valuable. They serve as the

standard against which we judge pseudo-causal statements (e.g., statements of correlation)]. The transformation of facts into data and data into knowledge claims is part of the work of method.

A Answer/Claims: What answer was given to the significant questions? What key facts did the method produce? Which questions did the investigators/evaluators know they failed to answer? Which answers did they give to questions they failed to ask in the beginning?

What critical limitations were the authors aware of? Unaware of? What claims beyond answers to the original questions do the authors make?

C Concept/Conceptual Structures: List the key concepts (no more than 10); describe the apparent ordering among these concepts. Which two or three key concepts are present in the significant questions? Try to identify the pattern of reasoning, the main arguments, the logic of the study.

Some concepts subsume others. Arrange the concepts in an order with the most powerful ideas at the top of a sheet of paper and the subordinate ideas toward the middle of the page. The operational concepts, those closest to the events of interest, will appear toward the bottom of the page. We call this ordering of key concepts a concept cluster or concept map.

Which key concepts are defined? Is the definition intelligible and useful in the context in which it appears (i.e., what definition is given?)?

To find key concepts, look for: operational definitions; the meaning given to independent/dependent variables; the theory or model or schemata, etc.; the key references.

In brief:

Q: What is the question?

U: What is assumed, unquestioned?

E: What is the question about? (The event, object)

M: How is the question answered? (methodology)

A: What is (are) the major answer(s)?

C: What conceptual structure is used?

Answering these six main questions will produce a view of the structure of the evaluation study. Because QUEMAC appraisal is also a critique of an evaluation, we call it a meta-evaluation. It is "meta-evaluation" because it is a kind of knowledge about evaluation that we generate through the analysis. The words "QUEMAC Value" help to focus the critique on the value questions of the evaluation.

A Clear Case Analyzed: Head Start

Kaplan, Eleanor S., "Head Start Experience and the Development of Skills and Abilities in Kindergarten Children" originally appeared in Graduate Research in Education, April, 1966, pp. 4-28; see also Millman, J., and D. Bob Gowin, Appraising Educational Research, Prentice-Hall, 1974, Chapter 4, pp. 23-49.

This study was published in 1966. The author wrote the following summary of the study. After you read the summary, then read the QUEMAC appraisal applied to the study. This appraisal of necessity leaves out much detail. For a more complete critique, see Millman-Gowin, Appraising Educational Research, chapter four.

Summary: Head Start Evaluation

The purpose of the study was to assess whether the children who participated in Project Head Start were better prepared for kindergarten than those who did not participate in regard to verbal communication, visual discrimination and naming, and motor coordination skills. It was hypothesized that kindergarten children who participated in Project Head Start would be superior in

verbal communication abilities as measured by verbal fluency, verbal usage, enunciation, ability to structure sentences, and ability to tell a story; that they would be superior in the visual discrimination and naming of colors and shapes; and that they would be superior in motor coordinator skill, as measured by drawing figures, coloring, cutting, and buttoning their clothing.

The subjects were seventy kindergarten children between the ages of four and five who were identified on the basis of whether or not they had participated in the Head Start program during the summer of 1965. Thirty-five children who had participated in this project were paired with thirty-five children who had not participated in the project using sex, age, ethnic background, language spoken in the home, age of siblings, and preschool experience as the criteria.

The subjects were then compared with respect to their verbal communication abilities. They were asked to tell everything they saw in a sample picture and to tell a story about that picture. They were rated according to the ability to structure sentences, story-telling ability, verbal fluency, verbal usage, and enunciation.

The subjects in each group were also compared in their visual discrimination abilities. Four colors and three shapes were presented to each child who was then asked to name each color and shape. The children's productions provided data to evaluate their cutting, coloring, and drawing skills. The children's ability to button their own clothing was also observed.

The data were analyzed in terms of comparison between the Head Start and non-Head Start groups, utilizing chi-square median tests of significance. The Head Start group did significantly better than the non-Head Start group in all hypothesized abilities and skills except for enunciation ability and cutting skills which did not reach statistical significance.

The present findings support the current view that culturally deprived children benefit from preschool enrichment programs. It was suggested that future research should further examine the values of preschool compensatory programs and establish an appropriate curriculum. Longitudinal studies are needed in order to ascertain the long-term benefits of such a program.

An Example: QUEMAC Value Appraisal of Head Start

Q Question(s):

(1) "Are children who participated in Project Head Start better prepared for kindergarten than those who did not participate?"

(2) "Can racism in America be combatted through the means of schooling?"

U Unattended Assumptions:

(1) "The earlier in the child's development, the better for schooling" ("effective enrichment").

(2) "Nurture, more than Nature, controls child development." (i.e., Jensen is wrong.)

E Event:

(1) A summer long Head Start program (e.g., "show and tell", "using letters of the alphabet", "classifying objects", "drawing the body shape of each child on brown paper", "distinguishing colors and shapes", "buttoning")

(2) Events made to happen by the evaluators (e.g., "telling a story", "structuring sentences", "naming colors").

M Methods:

Records of events: Various testing devices--(e.g., "Describe this picture test" - two firetrucks going to a fire, two policemen guiding traffic, people watching, a dog, etc., - and each child told a story until each child insisted there was nothing more to say)

Data transformation: e.g., children rated according to complexity of statement about the picture: A numerical value of zero assigned if nothing was said, of one if picture was described, of two if picture was described in considerable detail, of three if unorganized story was told, of four if organized creative story was told.

Table 1

Verbal Ability: Telling a Story	Number of Children Receiving Each Rating	
Story-telling Rating	Head Start	Non-Head Start (35)
4	10	4
3	11	7
2	6	10
1	7	11
0	1	3
	Median = 3.3	Median = 2.3 Chi Square = 5.74 $p < .025$

A Answer/claims:

(1) (e.g.) Head Start children were superior--in story-telling ability, especially in telling creative, organized stories . . . to non-participants.

(2) "Culturally deprived children benefit from preschool enrichment programs . . . ."

(3) "Longitudinal studies are needed to ascertain long-term benefits"."

C Concepts/Conceptual Structures:

The key concept that guided the "treatments" given in Head Start programs is language. The relation between language and social class was described in an influential series of publications represented by Basil Bernstein's "Language and Social Class", British Journal of Social Class, 1960, 271-276. Other concepts were also significant, especially the normative claim for equality of educational opportunity, cited in the study as "effective enrichment". But, as you can tell from the way the main hypothesis was stated, what is more central to the thinking at this time was language: verbal fluency, usage, enunciation, sentence structuring, telling a story. So we may construct a concept cluster, or concept map.

This example of a concept map shows the cluster of key concepts ranked in order from general to specific (those closer to actual regularities in events which happened in the

study). The concept "effective enrichment" is given operational meaning on the assumption that "more is better" when it comes to language use.

As the key concepts move down toward actual events, there is a loss of abstraction, a gain of precision, and an increased likelihood the events of interest will be trivialized by the selection of indicators, such as operational definitions. This shift in the level of discourse is a basic point to note in making a critique.

Thus, QUEMAC appraisal has a logic which connects the separate items of appraisal. It does not matter which question is answered first just so long as all questions in QUEMAC are answered and the critical abstract constructed out of the answer.

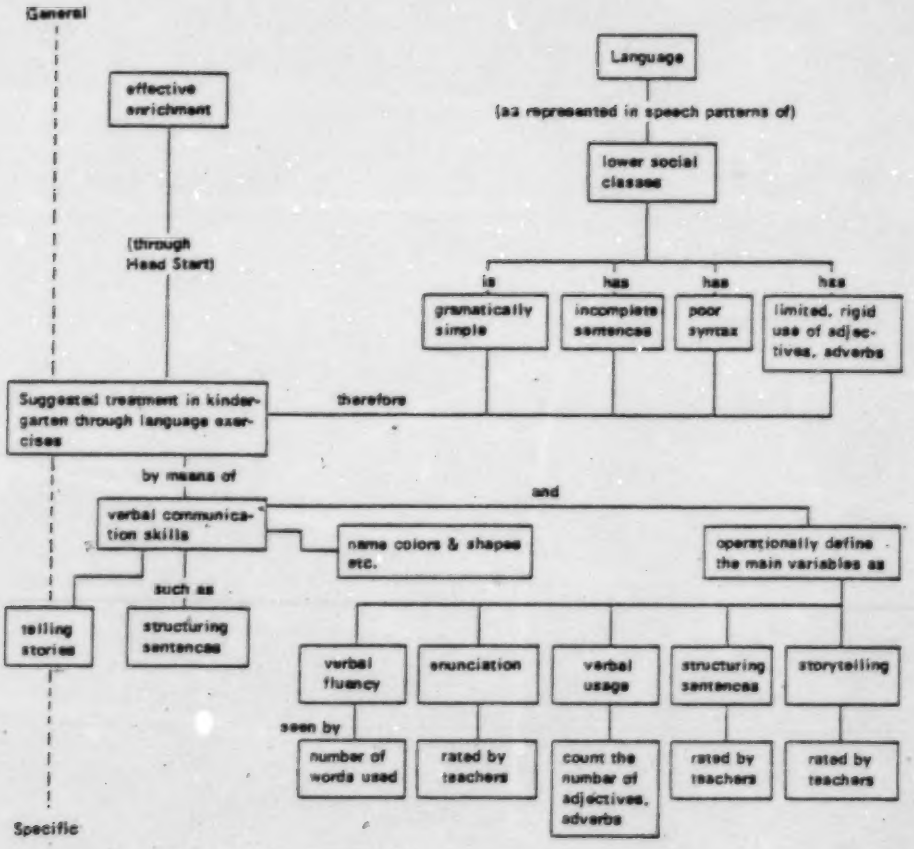
In brief, in this Head Start evaluation report, the children who were in the summer program did better on a number of tests, primarily those of verbal communication, than did children who did not participate. Little description of the actual curriculum and instruction was provided. Alternative possible explanations of the findings were not given, nor was there adequate description of such concepts as "effective enrichment", "lower social classes", "racism", "equality of educational opportunity". The cost of the program and comparison to critical competitors were not described. The main conceptualization was derived from studies in language and social class.

Using QUEMAC Value

General. In general we are asking value questions of evaluation reports. We want to know if the evaluation is "any good". So we can ask: "Is it good? What good is it?" The analysis of the evaluation report takes us through its several parts and leads us toward a final synthesis, an appraisal of its goodness/badness.

Most evaluation studies will not be organized so as to reveal their telling questions, or typically, their value questions. We believe that evaluators should ask and try to answer all five of the value questions shown below. Meta-evaluators should do the

CONCEPT MAP


General
effective enrichment
(through Head Start)
Language
(as represented in speech patterns of)
lower social classes
is
has
has
has
gramatically simple
incomplete sentences
poor syntax
limited, rigid use of adjectives, adverbs
Suggested treatment in kindergarten through language exercises
therefore
by means of
and
verbal communication skills
name colors & shapes etc.
operationally define the main variables as
such as
telling stories
structuring sentences
verbal fluency
enunciation
verbal usage
structuring sentences
storytelling
seen by
number of words used
rated by teachers
count the number of adjectives, adverbs
rated by teachers
rated by teachers
Specific

same. These questions help us to see what is NOT in the evaluation report. A critique of a study will show us what is missing.

Five Fundamental Forms of Value Questions and Value Claims*

Our experience with QUEMAC Value appraisals has led us to formulate five forms of value claims. Each of these forms may be phrased as a question. And the obviously appropriate place in QUEMAC is the Question. Put differently, evaluation studies pose their telling questions as value questions. What forms do these value questions take?

Forms of Value Questions	Example: Head Start
1. Instrumental Value Claim. "Is X good for Y?"	Is Head Start good for something else? Is it good for future academic achievement? Is it good for community relations?
2. Intrinsic Value Claim "Is X good?" "What is the good of X?"	Is Head Start good? Good in itself? i.e., Head Start is good if educative. How is Head Start educative? What is it about Head Start that is educative? (i.e., what are the treatments; how do they work?)
3. Comparative Value Claims "Is Y better than X?" "Is X better than Y?"	Is Head Start better than no treatment? Do Head Start pupils do better than non-Head Start pupils?
4. The Decision Claim "Is X right?" "Ought we to choose X?"	Ought we to choose Head Start? Is Head Start right? Is compensatory education right?
5. Idealization Claim "Is the good of X something that can be made better?	How could Head Start become better? What is the good in Head Start we can idealize to make it better than it is?

*This list of value questions is not exhaustive. See Part II for further discussion.

How to Find These Value Questions (See Note B for more discussion)

1. Instrumental value questions. Since it appears the easiest value question to analyze, meta-evaluators should begin here. Thus, for example, the question "What is Head Start good for?" leads immediately to instrumental value claims, e.g., "It is good for keeping children in school."

2. Intrinsic value questions. One way of finding intrinsic value claims is just to list all the instrumental value claims first, and see what is left over. Many instrumental value claims are directly linked to the intrinsic goods they serve.

A second way to find intrinsic value is to analyze the full and complete description of the object (event) being studied. Not all descriptions are descriptions of the value aspects of the object (event), but complete descriptions should include them. The intrinsic value of Head Start is its direct educative value, i.e., that some children were taught some things that educated them.

Mixed bag. Usually we find most objects of evaluation to be both intrinsically and instrumentally good.

If one is making an evaluation study, one question should be asked: "What is the good of X?" If it is a program, or a product, or a position, then those concerned with its evaluation will typically have some idea of its worth. Becoming explicit about what the values are in the events-objects is a direct help in getting at the value behavior of the relevant participants/clients/audience. In meta-evaluation, one should focus on whether the primary evaluators asked the question about the intrinsic value of the program, product, or position.

3. Comparative value questions. These questions are easy to find because typically they are explicitly asked in the evaluation study. Comparing one thing to another is a basic activity in evaluation. In this case, groups of children were compared.

4. Decision value questions. These, too, are easy to spot, especially when evaluation is conceived to be a service to a

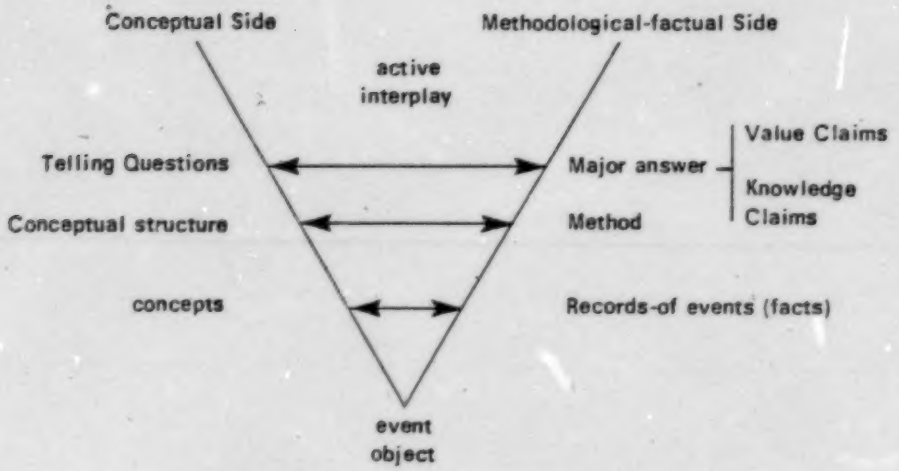
client who must make decisions. No decision-question was asked in this Head Start evaluation.

5. Idealization value questions. Sometimes the gap between the real and the ideal is made explicit. Filling this gap is thought of as a way to meet basic needs (i.e., the gap between ideal-real is a definition of "need"). No idealization question was asked in this Head Start evaluation.

QUEMAC Value Critique Summary

The QUEMAC appraisal, when summarized, should provide a succinct structure of framework of the evaluation study.

Figure 1. The Vee



The Vee is a heuristic device we use to bring together the various parts which together constitute the structure of the study. We talk about "laying the Vee" on documents produced by studies. This means that we have a template, a guide, a form, a device that gives us knowledge about knowledge: meta-knowledge, meta-evaluation. We also manage to preserve complexity while simplifying the way we represent the analysis of claims. Criticism shows us the structure of claims.

The simplest structure is the question-answer structure. What was the question? The answer? Since questions and answers are something humans produce through systematic inquiry, the method of approach to them is important. And since the questions and answers are about something, we need to specify the event/object or phenomena of interest that the study is about.

And since we think with a small number of key concepts, abstracting the study so as to present the concept cluster used is a convenient and important way into the thinking of the evaluators. Identifying unquestioned assumptions is important since any study must make assumptions, even though those assumptions might be questions in prior or subsequent studies.

Note A

Telling Questions. Some Problems and Hints

a. Only a small number of telling questions should be expected (1-4).

b. They may be ranked in order, but they need not be.

c. Some telling questions are not found in evaluation studies; the only questions asked are technical questions.

d. Some telling questions ar found, but not answered in evaluation studies. Sometimes (often unknowingly) evaluators use a smokescreen technique: a relevant telling question is asked to vindicate the study from charges of lack of significance, then this real issue is pushed aside and another more accessible question is answered.

e. A meta-evaluation can appraise the congruence between the telling questions asked and those which should have been asked.

f. If you can't find the telling question, then look at the answer actually given. Not only does the answer help formulate the question exactly and clearly (on the principle you know what the problem is when you find the solution), but sometimes evaluation studies start from an already defined conclusion.

g. If all else fails, a telling question can be built up within a study by using the journalists' technique: who, when, where, why, what, how. An example that signals many of these questions is "Can we improve nutritional practice in low-income families through an educational program for homemakers conducted by nutritional aides in the home?" These telling questions are constructed from all the concerns, assumptions, and information available within the study, and as such, it is an end product of the meta-evaluation analysis, not a starting point discernible at the beginning. Once you compose it, however, you should begin to believe it is the correct one, and that it pulls together in a succinct way the major concern of the study.

h. Telling Questions and Context. Going outside the study to the context which gives the study significance is the most difficult and perhaps more important place to search for telling questions. Knowledge of the wider context requires knowledge of history, of social problems and their significance, and of philosophical theories. Head Start needs to be placed historically in the context of Lyndon Johnson's Great Society, the social problem of racism, and the philosophical view that government and education can work together to solve social problems. In general, ethics and social philosophy have been under-utilized as a way to make sense of evaluation theory, policy and practice.

Note B

A Ubiquitous Value Question: "Is X good enough?"

This question, "Is X good enough?", thought to be typically American in formulation because of its pragmatic and expedient flavor, actually admits of interpretation in all the five forms of value questions we have presented. The question has many meanings which must be distinguished before we try to specify an answer. This question can lead us to all the other value questions, and is, thus, a good starting point.

1. Intrinsic value claim. "Is X good enough?" translated into meaning "Is X good at all?" "Is there any intrinsic value in X?" "Is Head Start educative?" "How is it educative?"

2. Instrumental value claim. "Is X good enough, considering the ends we have, to serve as means?" "Is Head Start good enough to keep pupils in school?"

3. Comparative value claim. "Is X good enough, compared to Y?" "Is Head Start good enough, compared to pupils who do not get it?"

4. Decision value claim. "Is X good enough, given contextual constraints, that we ought to choose it?" "Is Head Start good enough, given racism and unequal educational opportunity, that we ought to choose it?"

5. Idealization value claim. "Is X good enough, or can we make it better?" "Is Head Start good enough, or can we improve on it ideally?"

A Special Technique: Concept Mapping

Telling questions contain at least two concepts. To identify the telling question, then, puts you on the way toward identifying the conceptual structure. By conceptual structure I mean simply the cluster of concepts and the way in which they are related. A concept is a sign or symbol that refers to regularities in events and in records-of-events (the facts).

Concepts, conceptual structures, concept clusters come in a variety of forms. For example, the conceptual structure of music for the piano has a definite but loose form (Cf. A. Dyckman). This form has been influenced by many things: the historical traditions of music, changes in the concepts (of a scale: A. Schoenberg 12-tone scale, for example), the inventive grammar of creativity in music (Cf. L. Bernstein's lectures at Harvard), and the four major traditions (linear, atomistic, holistic, analytic) for teaching piano music (piano pedagogy).

The existence of different and definite conceptual structures in a field of study provides us with the evidence we need to back the assertion that multiple structures exist in all intellectual fields: a discipline is one word but many things. So, when we speak of the conceptual structure in our analysis it is wise to remember that more than one such structure exists in any field. An historical review of the telling questions and conceptual structures in any field is a find way to see these structures.

Concept Mapping

Concept mapping is a technique of analysis. We use it to show on a piece of paper just what a conceptual structure might look like. Once you have located the telling questions, or a paragraph that appears to contain the key concepts, then simply rank these terms. Put at the top of a piece of paper the most important terms. Rank just below them the next set of related but less important terms. Finally, toward the bottom of the page place the terms that come closest to events. Draw lines of relation between these terms. When you have done that you have drawn a concept map. See Figures 2, 3, and 4.

In Figure 2 you will see the first page of a classic research paper by Gregor Mendel, translated into English. It is difficult for non-specialists to read. In Figure 3 you will see a list of key concepts as they appear in the original. Such a list in itself does not make much sense. In Figure 4 you will see a concept map. This map organizes the concepts in the original so

that the most important concept is placed at the top of the page. As you move down the page you see how the various concepts are related to each other. At the bottom of the page we come to specific events or objects. The making of a concept map is one way to see the structure of conceptual claims in a document.

A concept map is a very handy way to represent ideas. When a significant piece of material has been converted into a concept map, then students can locate themsleves on the map. They can spot the terms they understand and see how these are related to new ideas they do not yet understand. Students who have learned to use this technique can begin to draw their own maps. A concept map is like a rubber sheet; when we pull at one place to highlight one set of ideas we find that other ideas shift. No one set of concepts is fixed for all time in a definite hierarchy. The pattern of ideas has an elastic quality.

Concept Definition

One of the most important things we do with key concepts in a field of study is to give them a definition. Defining what we mean by our key terms is a significant pedagogical move in making ideas usable by others. It is better, Charles Pierce wrote, to have a few clear ideas than a headful of fuzzy ones. Finding the definitions of the key concepts in a discipline (and knowing what kind of definitions they are) is a central move in curriculum analysis.

Over 20 kinds of definition have been identified by philosophers (Cf. Robinson, Definition). I am concerned here only with concept definition. Concept definition is similar to operational definition. The similarity is found in the relation between words and events. Basically to define a concept is to show the way the key term points to the regularities in the phenomena of interest, the selected events. Dictionary definitions typically are word-word definitions. That is, they define one word in terms of other words. At some more abstract levels of conceptual structures this word-word definition works

Figure 2

EXPERIMENTS IN PLANT-HYBRIDIZATION
Gregon Mendel

Introductory Remarks[1]

Experience of artificial fertilisation, such as is effected with ornamental plants in order to obtain new variations in colour, has led to the experiments which will here be discussed. The striking regularity with which the same hybrid forms always reappeared whenever fertilisation took place between the same species induced further experiments to be undertaken, the object of which was to follow up the developments of the hybrids in their progeny.

To this object numerous careful observers, such as Kolreuter, Gartner, Herbert, Lecoq, Wichura and others, have devoted a part of their lives with inexhaustible perseverance. Gartner especially, in his work "Die Bastarderzeugung im Pflanzenreiche" (The Production of Hybrids in the Vegetable Kingdom), has recorded very valuable observations; and quite recently Wichura published the results of some profound investigations into the hybrids of the Willow. That, so far, no generally applicable law governing the formation and development of hybrids has been successfully formulated can hardly be wondered at by anyone who is acquainted with the extent of the task, and can appreciate the difficulties with which experiments of this class have to contend. A final decision can only be arrived at when we shall have before us the results of detailed experiments made on plants belonging to the most diverse orders.

Those who survey the work in this department will arrive at the conviction that among all the numerous experiments made, not one has been carried out to such an extent and in such a way as to make it possible to determine the number of different forms under which the offspring of hybrids appear, or to arrange these forms with certainty according to their separate generations, or definitely to ascertain their statistical relations.[2]

It requires indeed some courage to undertake a labour of such far-reaching extent; this appears, however, to be the only right way by which we can finally reach the solution of a question the importance of which cannot be overestimated in connection with the history of the evolution of organic forms.

The paper now presented records the results of such a detailed experiment. This experiment was practically confined to a small plant group, and is now, after eight years' pursuit, concluded in all essentials. Whether the plan upon which the separate experiments were conducted and carried out was the best suited to attain the desired end is left to the friendly decision of the reader.

Selection of the Experimental Plants

The value and utility of any experiment are determined by the fitness of the material to the purpose for which it is used, and thus in the case before us it cannot be immaterial what plants are subjected to experiment and in what manner such experiments are conducted.

The selection of the plant group which shall serve for experiments of this kind must be made with all . . . .

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[1]This translation was made by the Royal Horticultural Society of London, and is reprinted, by permission of the Council of the Society, with footnotes added and minor changes suggested by Professor W. Bateson, enclosed within [ ]. The original paper was published in the Verb. naturf. Ver. in Brunn, Abhandlungen, iv. 1865, which appeared in 1866.

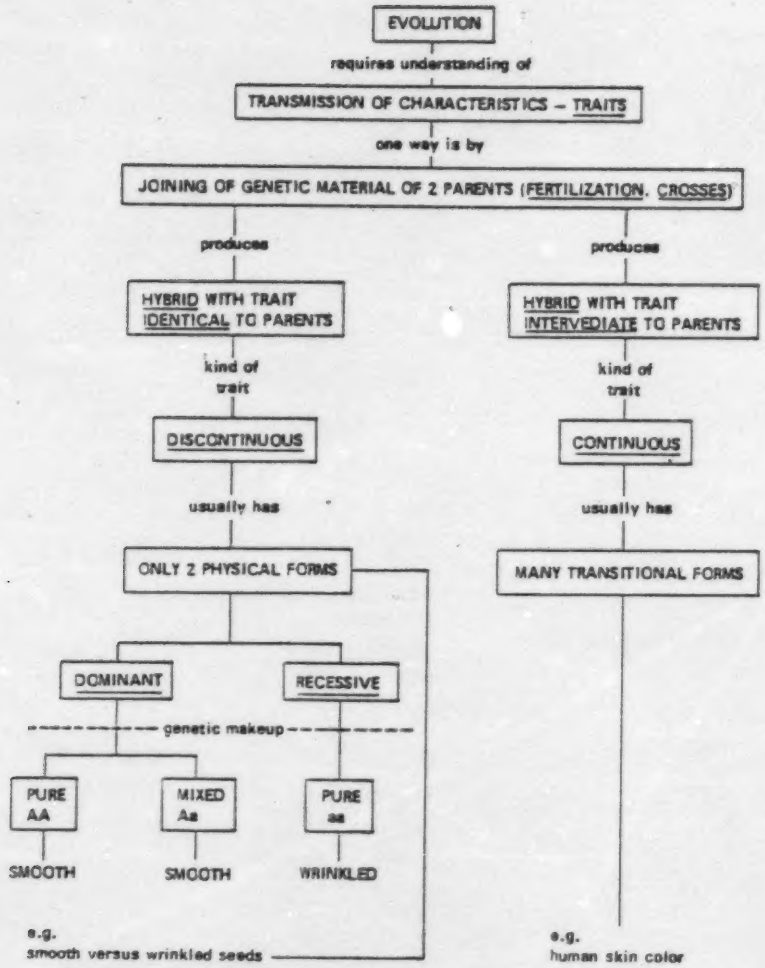
[2][It is to the clear conception of these three primary necessities that the whole success of Mendel's work is due. So far as I know this conception was absolutely new in his day.]

Figure 3

CONCEPTS (IN ORDER OF APPEARANCE):

Artificial fertilisation
Variations
Hybrid
Form
Progeny
Evolution
Constant traits
Differentiating traits
Fertility
Flower anatomy
Classification schemes
Species
Varieties
Transmission of characteristics
Generations
Crosses
Continuous traits
Transitional forms
Vigor
Reciprocal crosses
Entire transmission of traits
Dominant
Recessive
Significantion (= genetic makeup)

Figure 4


EVOLUTION
requires understanding of
TRANSMISSION OF CHARACTERISTICS – TRAITS
one way is by
JOINING OF GENETIC MATERIAL OF 2 PARENTS (FERTILIZATION, CROSSES)
produces
produces
HYBRID WITH TRAIT IDENTICAL TO PARENTS
HYBRID WITH TRAIT INTERVEDIATE TO PARENTS
kind of trait
kind of trait
DISCONTINUOUS
CONTINUOUS
usually has
usually has
ONLY 2 PHYSICAL FORMS
MANY TRANSITIONAL FORMS
DOMINANT
RECESSIVE
genetic makeup
PURE AA
MIXED Aa
PURE aa
SMOOTH
SMOOTH
WRINKLED
e.g.
smooth versus wrinkled seeds
e.g.
human skin color

just fine. But at some point, every conceptual structure needs to be brought into relation to the real events, or phenomena, of interest. Getting an "event sense" of an abstract concept is a good step to take toward understanding it (ostensive-pointing-definitions).

Operational Definitions

Operational definitions appeared in modern physics and philosophy in the first quarter of the 20th century. Because there were difficulties with certain very abstract concepts (light, length), some physicists (Percy Bridgeman was a leader here) recommended that the key concepts could be defined by discussing the way they were used in the activities of measuring. So, length became operationalized by discussing whether one used a yardstick or the speed of light as the measuring instrument. In psychology, intelligence was operationally defined by the operations of giving and scoring intelligence tests. The record of the event of test-giving, test-taking, and test-scoring was the observation. Intelligence was then defined in conjunction with the operations used to measure it (Cf. A. Rapoport, Operational Philosophy).

Concept definitions are similar to operational definitions, as I have said. The similarity consists in the common focus on events and their records. But it is not necessary to reduce all concepts to operations just so long as some thread of connection can be made between the most abstract of concepts and the regularities of the events of interest. Our technique for concept mapping shows us very clearly just how these relations between the abstract and concrete can be drawn in different studies.

Concepts refer to patterns, regularities in events. When our concepts are well defined it seems that the events are maximally invariant. The platinum meter stick on exhibit in Paris is taken to be the definition and the standard of precision for all meter sticks; it varies very little. In ordinary experience most of us do not have any trouble defining a car as a car because, even

though there exists a large variety (the variance is great), the regular features of a car (four wheels, a motor, gears, etc.) are quite common and familiar to us. Likewise, in the conceptual structures of a discipline, there will be some concepts with precise definitions and others with much less precision. Precision and clarity of meaning are both important.

Concepts and Constructs

Conceptual structures in working sciences carry a share of constructs in addition to concepts. Constructs are simply those ideas that help to hold togethger the key concepts. These constructs are like bridges across one conceptal ground to another. They are constructions between concepts. In genetics, for example, Mendel used the construct of "factors" which later gave way to "gene". These ideas did not have an operational meaning. As gene has now changed in some biochemical studies of genetics to "polypeptide" (one gene, one polypeptide is the central dogma today), the status of the word has shifted from that of a fertile construct to a definite concept.

Concepts and Logical Operators

All conceptual structures also carry logical operators. These are terms like "either", "or", "not both", "and" (meaning conjunction), "If . . . then", and the like. These terms help in framing conceptual arguments. Well-reasoned arguments are a most significant part of any field's conceptual structure. In some cases these arguments can almost be reduced to logical forms (e.g., "not both p and q"). The closer one moves to simple logical purity, however, the farther one moves away from substantive assertions of claims about the world. It is important to recognize logical operators and logical arguments in conceptual structures, but it would be a mistake to substitute one for the other.

Concepts and Words.

It is convenient to think of concepts as words. The word "time" and the word "tiempo" have the same meaning. "Time" is part of the English language and "tiempo" Spanish. The shape of the words are different, and the sounds are different. What, exactly, is it, then, that is the concept?

The first move to make with this question is to suggest that the words are carriers of the concept. We call them sign-vehicles. Just as an automobile and a wagon are vehicles for passengers, words are vehicles for concepts. But this analogy, helpful as it is concerning the carrier role of signs, is misleading because it suggests that concepts are entities taking up space and time. This suggestion would lead us to try to locate concepts, perhaps as mental entities in the mind, or physical entities of some sort in the brain.

But concepts are more like fluid events than fixed entities. When we think of words as carriers of concepts, then we can also think that the word-vehicles (including terms, sentences, symbols) serve the role of being concept facts. That is, words are records of concepts. A word is a record of a concept event. We use words as the facts of language.

Token. A word is a vehicle for a concept the way a token (a piece of money, e.g., a dime) is a carrier of value. We exchange tokens in barter and other free market activities. Words are the medium of exchange in free communication; we exchange concepts in a conversation.*

In concept exchange nothing is lost. One of the most significant points about exchanging ideas with another person is

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*Type and token. Linguists and philosophers make a distinction between a word type and a word token. For example, on this page of printed material the word "the" is printed more than one time. By counting all the times the word "the" appears, you will have the number of tokens of that word. Each time the same word appears it gets counted. So far in this paragraph, there are seven tokens for the word "the". But the word "the" as a word type has appeared only once.

that nothing is lost, and much is gained. A slight amount of energy is used, perhaps, but we scarcely notice it. If I give you an idea, and you give me one in return, I do not lose my idea and I do gain yours. Teaching, as the achievement of shared meanings, is economically very efficient.

Review and Summary

In Part I we have presented a method of analysis, called QUEMAC Value. Our experience in using this method has made it better but it could be improved. As you experience this method you may see a need to change and improve it. We would appreciate receiving suggestions if you care to share them with us.

The concept of value is, we think, fundamental to the practice of evaluation. Like many basic concepts there exists a cloud of ambiguity surrounding it. In Part II of this work we try to clarify the meaning of the concept of value. We next turn to this task.

Part II:
Further Philosophic Questions About Value

Utilitarianism and Evaluation

Philosophic theories of ethics and social philosophy propose answers to questions about what is good and what is right. Evaluation practice also involves questions about what is good and what is right. The good and the right become significant for evaluators because evaluation studies are structured to help clients reach decisions. In making a decision we are trying to decide what we ought to choose, and why. Decision-making is supported philosophically by claims about the good and the right. What the right thing for an individual person to choose and do may not be the right thing for social order. The question, then, of sovereignty, or ultimate authority over actions, becomes important. Concepts of authority (power over) and social utility (what is useful for social problems common to the group, e.g., safety, survival) need to be related to each other.

A fundamental question is how do we reach agreement about social policies and social actions. This question concerns ways we secure cooperation among people so common purposes can be shared. Such common purposes, for example, are safety, rule by law, health, education. Securing cooperation requires us to search for a common ground among people. We need ways to reach agreement from each of us in sharing in the common purposes. Each of us has a stake in the whole, and the whole social order is governed so common purposes are achieved. When a common ground cannot be found, we can often agree on a procedure for deciding

what to do without having to agree on what is good. One of the goods, then, is a good procedure.

Questions about goodness-badness are value questions. Answers to these value questions we call value claims. Value claims are like knowledge claims in many ways; value and knowledge claims are mixed together in evaluation studies. We can begin to sort them out by an awareness of background ethical and social philosophy theories. We accept the view that ethical theories offer assistance for individuals in deciding what a person ought to choose and do, and that social philosophies propose different views for what a social order ought to be like and why. Individuals are persons-in-a-social-setting so the dividing line between the individual and the social is not hard and fast.

A key issue for evaluation practice is the relation between the individual and the social. Can we satisfactorily evaluate a program (say, Head Start) by getting data on individuals and summing those data as an index to the social? Or must we assess a program in terms of its social structure and look at the quality of the educative event as such? We know that schooling events have different qualities. We know that a specific act by a teacher in one school may be educative and the same act miseducative in another school social setting (Cf. Rugger, et al., 15,000 Hours). The same act may be educative for some persons more than others.

This key issue is also important in ethics and social philosophy. Social philosophies take many forms, and what we next write is a simplification, but we think not a distortion. We sketch three major social world views: individualism (classical liberalism), collectivism (socialism), and totalitarianism (fascism). Classical liberal individualism takes the view that the (atomistic) individual is sovereign and that a benign social order develops as a by-product of individuals pursuing their own well-being. The social order is nothing but a collection of individuals. Socialism takes the view that an organic unity between individuals (such as family, or team) is sovereign and a good social order develops as cooperation is pursued as

intrinsically good interactions among people. Fascism takes the view that the total state pursues the interest of an intrinsic total good and individuals derive personal worth from participation in something greater than themselves. The main point in this paragraph is to note that these different views on the relations between individuals and the social order help us to see alternative assumptions about what is to count as a primary good in the realm of the social order. A primary good is one which is fundamental to the development of other goods.

Utilitarianism, a Philosophic Basis for Evaluation

We think the philosophic view known as classical utilitarianism influences evaluation practice. We will show how utilitarianism is a plausible interpretation of both purposes and procedures of evaluation. In particular, the focus on evaluating consequences of social policies, a principle of utilitarianism, highlights the structure of evaluation documents, and we believe such abstract views help to explain why evaluation practice is as it is today.

The hope of the classical utilitarians Jeremy Bentham and John Stuart Mill concerned procedures for making value judgments objective. They wanted to be able to judge social policies and social actions in nineteenth century England. They thought such policies and actions could be objectively judged by evaluating the consequences of such actions and policies. And they were convinced that the effects of actions could be counted (measured). Quantification had appeal because they thought it was a sure way to find common ground for social agreement. Agreement between persons, sometimes called intersubjective agreement, is desirable in democratic social orders. Evaluations of social actions which result in common agreement are also highly desirable. It is important to stress that quantification should serve the interest of reaching a common ground about what social actions are of value. Quantification as a basis for scientific generalizations is not the important point. Utilitarianism is an ethical theory

proposing answers to the normative question: "What makes an action or practice right? wrong?"

A major assumption of classical utilitarianism is that each person is to count as one and no one's good can count for more than anyone else's (one man, one vote). This principle of egalitarianism is taken to apply to all, and is, therefore, universalistic. That is, the consequences of a social action that might affect anyone are to count as having the same social value. Each person is to count as one, and any social policy or action can be justified as it promotes the greatest good for the greatest aggregate number of persons. The greatest good is the best balance of good compared to bad consequences of social actions.

How does utilitarianism propose to assess the value of states of affairs that are the consequences of actions or practices?

How do we evaluate the consequences of social policies, actions, practices? And, how is it that evaluation practice checks out the differences in consequences? If Sesame Street or Head Start can be taken as instances of social actions, what should evaluators do to assess their merits? What sort of consequences of these social actions are good? bad?

We must realize that some states of affairs are intrinsically good. Some things are just good-in-themselves. Simple pleasures, good health, the happiness that comes from intellectual grasp can be taken as positive instances. Absence from pain, disease, poverty, intolerance are also instances of goods. Freedom (liberty) is a primary good. It is the marginal balance of good over bad that must be assessed in any given case. We may not always agree on all states of affairs that are intrinsically good, but most people will recognize in particular cases the existence of what can be taken as intrinsically good. If being in charge of one's own education is intrinsically good, then educating people is a right action on utilitarian grounds. Educational value accrues to individuals in a social context.

In utilitarianism, any action or practice is right if it leads to intrinsically good states of affairs. The social action of Head Start is right because it leads to educationally powerful

goods. In evaluating social actions, then, we look to the consequences of these actions as they conduce to good states of affairs. We might ask in our evaluation "What do Head Start practices bring about that is intrinsically good?" What different sorts of assessments are appropriate to establishing the worth (goodness-badness) of Head Start, or any other social action? Since actions are right that lead to good states of affairs, therefore, we look to the consequences of actions to see if they are good or not.

In classical utilitarianism two views have been presented about what is intrinsically good: pleasure (Bentham), happiness (Mill). In Bentham total balance of pleasure over pain was what counted. In Mill the higher pleasures of intellectual excellence contributed more than sensual pleasures to happiness. For both Bentham and Mill the correct assessment of the good was a major concern. Can pleasures be counted? Bentham proposed a hedonic calculus, a method for assessing pleasures. Mill thought the good, seen as happiness, is not the mere sum total of pleasures because there are qualititative as well as quantitative differences among pleasures. For both Bentham and Mill preferable actions and practices are those contributing to the living of a life filled with intrinsic goods. Utilitarianism must assume that measured quantities of the good are quantities <u>of</u> pleasure of <u>of</u> happiness, and these quantities can be objectively measured. A basic problem for utilitarianism is that so many different answers have been given to the question, "In virtue of what are states of affairs good?" Is it pleasure, happiness, or something else that makes some states of affairs preferable to others?

<u>The Appeal to Consequences. The Appeal of Consequences</u>

The principle of right is that an action is right if and only if it produces the greatest balance of good over bad consequences. These good consequences are located in <u>states of affairs</u>. Three basic criteria are proposed by classical utilitarianism as criteria for judging actions: the factors to be considered are

the purity, the fecundity, and the certainty of consequences. We are concerned here with the relation between actions and their actual, not merely their intended, outcomes.

The concept of purity refers to intended as opposed to unintended consequences. We would be checking for side effects. An action mixed with undesirable and unintended consequences is not as right as one which will actually tend to produce purely desirable consequences. In any social action we may expect undesirable consequences; bad consequences are often foreseeable. These bad consequences must be weighed together with the good they accompany. Thus, it is not just any action which produces the greatest total good but rather the greatest net good when the bad is assessed. In extreme situations in which we confront only a range of undesirable alternatives, we must try to minimize the bad consequences, under the criterion of purity, as a way to decide the purest of actions from among the bad lot. The concept of purity calls our attention to a feature of utilitarianism which is a concern with a range of alternative actions and practices. We keep our options open. We compare alternatives and assess their worth.

Fecundity is the second concept we use to evaluate actions. Some immediate consequences are more desirable than others because they help cause desirable consequences later on. We judge a present action as helpful or hindering to actions we will have to take subsequently. Educative events are often judged for their fertility in creating further good consequences. Learning to read leads to reading, which can lead to further knowledge, and so forth.

The certainty of actions producing good consequences is the third concept used in evaluating actions. Prediction of consequences of actions can be made with degrees of probability. Those with the greater certainty are assigned greater weights. Typically, short run consequences are more certain. Remoter consequences suffer the intervention of unforeseen factors.

Purity, fecundity, and certainty are concepts we use to think about the connection between actions and consequences. We are

evaluating actions on the basis of this connection. We must next look at four concepts used to analyze states of affairs. These four concepts are intensity, duration, propinquity, and extent.

Intensity refers to estimates of how much good/bad exists for every affected person. Remember classical utilitarianism seeks the greatest good for the greatest number of all affected, with each person counting equally. If we had a pleasure meter or a pain indicator we would be able to quantify the intensity of the pleasures and pains. A laugh meter or applause indicator can be taken as a way to measure intensity in states of affairs.

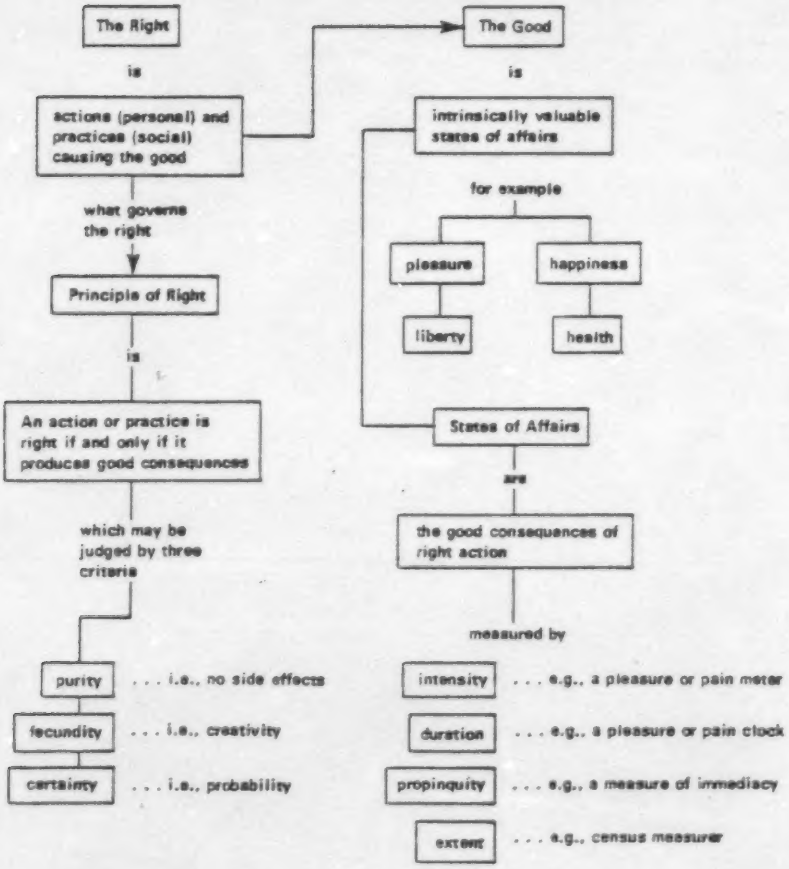
Duration of a good or bad is another concept. In this case we need something like a pleasure or pain clock, measuring how long a given quality in states of affairs actually lasts. Long lasting qualities are preferable to short-lived ones.

Propinquity is a third concept used in evaluating consequences. This judgment is also time-related. We are estimating how soon or how far away some good may be. We might ask how long is the interval of time between the present and the good or bad that comes about. This concept is very important in cost-benefit analysis. If we think of costs and benefits as monetary, we can judge that if the benefit comes sooner than the costs, then we can increase the value of the benefit by the interest we can gain before costs are paid. But notice also a person who gives up a job to study pays an "opportunity cost" (i.e., the money he would have made on the job) before any benefits accrue from study. In cost-benefit analysis, we subtract costs from benefits to define the marginal utility of the action. Economic utilitarianism can assign units of value (dollars) and, therefore, increase the precision of calculation. Measures of pleasure or pain, happiness or unhappiness are not as precisely quantifiable as costs and benefits. Economic profit and loss are not, of course, the whole story of the goodness and badness of consequences of social actions. No single procedure for evaluating consequences is likely to be satisfactory.

Extent of good or bad consequences is the fourth concept. How many persons are involved in the state of affairs created by the social action? We are taking census measures. Clearly for utilitarianism the greatest number is better than any other. Since each person is of equal worth, the more the merrier. In educational evaluation, the total number of students affected by an educational practice is a frequently used estimate of a program's worth. Evaluations are about consequences to individuals. Every individual merits appraisal.

In general, utilitarianism is a theory of social evaluation. Evaluation is seen as an objective means for making value judgments. These judgments may be about personal actions or social practices. Agreement among persons is desirable and such agreement is more likely to be achieved if value judgments are objective. Objectivity increases when judgments are quantified. Notice the assumption that quantification represents standards of what is thought unproblematic in value judgments. Quantification procedures may be, and often are, just as problematic as any other procedures; much depends on the events and objects being evaluated. See Concept Map, "Utilitarianism."

CONCEPT MAP
UTILITARIANISM



Review and Summary

Evaluation documents present multiple claims. Of all the claims, four are important: factual, valuational, conceptual, and methodological. Factual claims are answers to questions about what exists as an object or event. Facts, that is, records of events, are the facts of the case and are important to establish descriptively. But they must be transformed into data, that is, given some order and significance. Data then are used to back knowledge claims. Value claims are answers to questions about the existence of value. Simple claims of value are transformed into five fundamental forms of value claims. Conceptual claims are answers to questions about the meaning of concepts. The meaning of concepts is a function of their use in a context of inquiry and evaluation. We have developed the technique of concept mapping as a way to make conceptual structures evident.

We are also making methodological claims. Actually, this document so far presents a method of analysis for the structure of claims. Methodological claims are answers to questions of how we establish other claims. QUEMAC Value is a method of analysis. Concept mapping is a technique of this method. Using the heuristic of the Vee is also a technique of analysis.

To know what multiple claims exist in evaluation studies should be helpful. It should be helpful in the analysis of studies as well as in the creation of new studies. It is from an analysis of prior studies that we derive criteria of excellence. These criteria can be used to judge existing studies and to guide the development of new studies.

Utilitarianism, a version of the classical view, is presented as a theory of evaluation. It proposed that we evaluate the consequences of social actions and practices. It proposed several concepts (purity, fecundity, certainty, intensity, duration, propinquity, extent) and techniques of the evaluation of social actions.

What Is Educational Value?

We come into the world through birth, but we come into possession of our powers only through education. Education is that process by which we come into possession of our powers for the exercise of intellect, emotion, imagination, judgment, and action. It is also a process by which we come to self-understanding, including the capacity to "change our minds". If any object, program, pattern of instruction, and so forth has educational value, then its value resides in its utility for education. That is to say, its educational value is its utility for helping us come into possession of our powers. Hence, to say that one educational program or object is educationally better than another is to say that it has more educational value. It contributes more to our coming into possession of our powers as human beings.

Of course, any educational program, school, or other object of evaluation may have other kinds of worth than educational worth. It may, for example, have social value as well as educational value. That is to say, a particular object of evaluation may have little efficacy in helping us to come into possession of our powers and at the same time have great value in helping us to come into possession of a job or in helping us to attain a particular position in life. Coming into possession of these things is also something of value, but their value is distinguishable from <u>educational</u> value.

Among the many activities of formal education, some will have more worth than others. And among those that have worth, some <u>may</u> have great social utility but little educational utility. And conversely, it may happen that among the activities for formal education, some may have little social utility and, at the same time, be of surpassing educational worth.

Every experienced teacher has witnessed from time to time what happens when a student finds just the right word, has mastered the new technique, grasped that fundamental principle, sharpened the ear to hear just the right note, or obtained the perfect

result from a labored experiment. On such occasions of significant learning, the usual response of human beings is to laugh. Learning, when it is truly educative, is always an experience that borders on hilarity. If someone were to happen upon the scene at such a time and ask, "But of what use is it?" the proper response would not be to answer the question by some contrived account of utility, but to reject the question altogether. Anyone who has to ask at such moments "Is it good?" "Of what use is it?" just doesn't understand what has been going on.

The appearance of such hilarity or its accompanying subdued chuckle is a sign of an experience of educational worth. It would remain a sign of the presence of educational value even if the thing learned or grasped lacked any social utility at all. If we could discover some combination of text, teacher, and pattern of question and answer that would invariably produce such results, then we would have discovered an educational object of surpassing educational worth if it had no other kind of value at all.

Such events have educational value not only because they reveal what it is to come into possession of our powers, but also because they permit us to come into possession of our world, the world we live in. And they have this significant value because such events consist in the construction of meaning.

We understand the creation of meaning out of human experience when we understand that one something (an A) can come to stand for another something (a B). The footprint in the sand is taken as a sign that a person probably walked there. The footprint that is present is a sign of the person who is absent. The footprint is a record of an event. If the ocean washes over the footprint that record will be destroyed. There is then no remaining basis for a sign of those past events. We say that smoke is a sign of fire, and sometimes it is. We say that dark clouds are a sign of rain, and sometimes the rains will come. When we take something that is in present time (the footprint) to be a sign of something else past (the person), then we are making inferences. We are also making meaning. When we say that "A is the sign of B" or "A stands for B", we are also saying "A means B". The footprint

becomes a sign. It stands for or means a person. The smoke means that fire is likely; the clouds mean rain.

Social meaning is an achievement of shared human activity such that the same sign is taken to stand for the same event for different persons and at different times. Meaning is generated out of shared experience. This possibility of shared meanings so that different persons can undergo the same experience is what makes educating possible. Meaning is social. When meanings are constructed, our powers as human beings are roused. We come into their possession. But when meanings are constructed, we also come into possession of our world. Meanings connect things. And it is this feature also that gives certain events their educational value. The construction of meanings connects the present to the past--the footprint to a person. They connect the present to the future--the clouds to the likelihood of rain. They connect events to causes both present and future. They connect also facts to principles and hope to memory. In these kinds of events, arising out of the construction of meanings, we discern not only our coming into possession of our powers but also our coming into possession of the world we live in. Educational value arises out of the construction of meanings that tie things together and thus create our world.

It follows that not everything learned has educational worth, because not everything that is learned has utility for making connections, for constructing meaning, and, therefore, for arousing and perfecting our human powers. Learning some things will have large social value and little educational value. Consider learning to tie a bowline or a half-hitch. These are very nearly the seaman's universal knots. The widespread acquisition of such skills has a large social value for a seafaring people. But in saying this we leave it still an open question as to whether learning to tie a bowline and a half-hitch has educational worth. Does the acquisition of that skill make meanings? These are useful knots in trimming the sails and in mooring the boat, but do they make connections or meanings--signs to events, past to future, hope to memory? This, we do not yet

know. The social value of learning such skills is clear. Their educational value is not so clear. Their mastery makes for security in a storm. Does their mastery also make meanings, connections of another kind?

It is important to note also that in this account of educational worth, the educational value of any object (curriculum, lesson, pedagogy, text, school) is never to be discovered exclusively in the object itself. Educational worth will almost never be discovered entirely in "what happens" to the learner as a result of undergoing the lesson. It will be discovered only in what the learner does. Hence, the same lesson may have large educational value for one learner and little for another. Which it is depends upon whether the learner makes connections, constructs meanings, comes to grasp the meaning and whether, therefore, that hilarious experience of confronting educational worth occurs.

What is in the lesson, its contrivance, its placement in a sequence, the method of approaching it--all of this may be predetermined. But the educational worth of what is learned can never be predetermined because it must remain always an open question as to what the learner will do. What is being taught may be predetermined; but what is learned and whether what is learned has educational worth, must remain always an open question, since it depends upon what the learner does. The study of "effects" is destined always to avoid the measure of educational worth because what needs examination is not what the lesson does, but what the learner does.

We think there is probably an inverse relation between our capacity to preplan what the learner will learn and our capacity to measure the educational worth of what is learned by measuring our preplanned objectives. In other words, we can control for what is learned in any lesson (curriculum, text, pedagogy, school) only to the extent that we can control what the learner does with the lesson. The educational worth of the lesson resides, however, not in the lesson itself--whatever its design--but in the combination of the lesson and what the lesson does with it.

The educational value of any object resides in its utility for assisting us in coming into possession of our powers and coming into possession of the world we inhabit. The possibility of educational worth, like the possibility of education itself, rests upon the fact that meanings are social constructions that, on the one hand allow us to exercise the powers of inference, self-understanding and thoughtful action, and, on the other hand, tie things together in the world that we inhabit.

Grasping the meaning, especially of materials that embody the criteria of excellence, is also fundamental to the educative process and to the grounds upon which educational value rests. The occurrence of grasped meaning is often expressed in statements such as: "He has the sense of it." "She got it, by golly, she got it." "He has the hang of it." "Now I see what you mean." "So that's the point, eh?" "If you just see this, then all the rest follows." "You mean Caliban, Ariel, and Prospero stand for the tripartite soul of Renaissance Man!!" Grasping the meaning is something that each of us must do; it is not part of what the lesson contains. We must do it ourselves even though we may need extensive help from others. Learning, that is, the kind of learning that constitutes learning the materials to the point of mastery, is the responsibility of an individual. It is not something that can be shared. When learning really requires mastery, that is to say, when it really has educational worth, it requires the grasp of meaning. Indeed, when learning has educational worth, it is the grasped meaning that one initially learns. However, given the grasped meaning, then one's experience is different, and additional learning becomes possible. Meaning is extended; connections are made.

Consider. In order to learn to tell a joke we must first "get the point" of the joke. If we do not first "get the point", then we cannot learn to tell the joke; but having "got the point", we can. The example is fruitful. Consider the dismay that is felt when after telling a joke someone says, "I don't get it!" To explain the joke by making the argument of the joke explicit always destroys the joke. We must "get the point" but we cannot

be "given the point". Getting the point is the first and necessary step. Then we can learn to tell the joke. (Note "getting it" in the case of jokes always requires making an inference, even in the case of sight jokes.) In such cases, and indeed probably in all cases, what we learn first is "the point". The grasped meaning is learned first. What follows is the possibility of new learning, learning to tell the joke.

For a seafaring people it is easy to get the point of being able to tie a bowline. That skill has immediate and visible social value. It is needed in order to trim the sails. So learning to trim the sails has its point, and it is not difficult "to get". But learning when to trim the sails--that is more difficult. It is also of greater educational worth; not, however, because it is more difficult, but because it is more fruitful, more fructifying, more pregnant with inferences, more filled with potential meaning. It evokes more connections in the arousal of human powers and is more powerful in putting together the world in which a seafaring people live. But whether we are concerned with learning to tie the bowline or learning when to trim the sails, the first step is "getting the point". Grasping the meaning is the prelude to learning. It is the kind of learning that permits learning to continue. Where there is no point, no meaning to grasp, there is little probability that anything of educational worth will occur. Yet, this "getting the point" is inescapably an act of the learner, not a property of the lesson. What has educational worth may be discoverable in the intentions of the teacher and in the plan of the lesson, the curriculum or the program, but it will be discoverably only in the actions of the learners. Therefore, the fact that everyone taking the lesson has learned to tie the bowline, does not establish that the lesson had educational value. Nor does it establish that the lesson was educationally better than one in which fewer learned to tie the bowline. Such evidence establishes that the lesson was better in getting persons to possess the ability to tie the bowline; but it leaves untouched the question as to whether the lesson had greater or less educational worth. What is taught by the teacher and what

is intended by the lesson is surely never all that is learned by the student.

To teach then, is to try deliberately to change the meaning of students' experience; and students must grasp the meaning, they must "get the point", before learning, deliberate learning can occur. Often in the context of educating, a teacher may make a point and find that the student response is laughter. That is one way that skilled lecturers tell whether their audience is with them on a point of real significance. Nor is laughter the only index of the occurrence of grasped meaning and the only link between the powers of intellect and the capacity for emotion. Anger, fear, shame, affection, and desiring are also indices of the feelings that accompany thinking when thinking is truly educative. Educational value is evident in those moments when grasping the meaning and feeling the significance of that meaning come together. When cognition is educative, then it is never separable from emotion. When cognition occurs without emotion, then it is always cognition that does not matter. It is learning and knowing that is not truly educative.

Political Paradoxes of Unanswered Claims

It may be worth observing that we live in a time when there is a rising complaint that the schools are less excellent than they can be, less effective than they should be. There is a loss of confidence. If we are correct in our portrayal of educational value, then there is a notable irony and paradox in this complaint.

For if we are correct, then it follows that nobody is in any doubt as to the nature of educational value. Everyone knows what it is. There is no privileged access to the idea. It is not an occurrence known to philosophers anymore than it is known to parents. Educational worth is known, discoverable and recognized by everyone. Let us suppose that the public complaint is to be interpreted as the claim that the schools do not educate. What

they do, on the whole, does not have educative value. But let us suppose further that the response of school administrators, legislators, and teachers is to do whatever is needed to raise the achievement scores of students on standardized measures. It is an important possibility that the answer given, though an answer to some question, may not be an answer to the complaint being raised by the general public. It is asked, "Why don't the schools do a better job of educating?" to which the response is "Let us raise the levels of achievement." But levels of achievement may be raised without improving the level of educational worth. We do not mean that raising levels of achievement is a bad thing to do. We mean only that it may not be an answer to the complaint being raised. The question asked is not the question answered, and the answer given is not an answer to the question asked.

Value and Having Values

Whether we are teachers, parents, or members of the general public, we want to ask "What values do our children have?" "What values should they have?" Everyone recognizes that these are important questions in the conduct of education. They may also be important questions for the conduct of educational evaluation. But few are prepared to answer them with any confidence. We do not propose to answer them either. But, in this section, we do aim to examine these questions through their different permutations and logical forms to study their meaning, their implications for practice, and the logical requirements that would have to be satisfied by any attempt to provide answers. We do propose to consider how the nature of these questions may influence the practice of evaluation.

"What values do our children have?" "What values should they have?" These questions are by no means clear. In fact, as we shall try to show in a moment, it is not clear what intelligible sense, if any, can be attached to such questions, although we

have no trouble recognizing that they occur with frequency and are of great concern to many people. What do they mean? What would count as answers to them?

In general, we may discern in our own tradition of ethical reflection that claims about valuing, about worth, and about the characteristics of persons, are different kinds of claims. Consider the following classification:

Table 1

Language of Value Assertions Classified

Type #1 "Value" as Verb	Type #2 "Value" as Predicate	Type #3 "Value" as Virtue
A values honesty.	Honesty has value.	A is an honest person.
A values freedom.	Freedom is valuable.	A is a free person.
A values learning.	Learning is a worthwhile activity.	A is always asking questions, etc.

What is the conceptual principle that generates this classification? It is easy to see that in the first column, the word "value" occurs as a verb. Valuing is an activity of persons. In the second column, however, it occurs as a predicate, a property of things other than persons. The first sentence of type #1 is a statement about a certain individual, A. But the corresponding statement of type #2 is a statement about honesty. In the third column we should note that the term "value" does not occur at all. Neither do any of its cognates--"valuing", "valuable", "worth", "worthwhile", etc. Instead, what was a verb in statements of type #1 and a predicate in statements of type #2, is now replaced by a complex predicate describing some aspect of a person's character or personality, and the concept of "value"

does not appear at all. Expressions of type #3, like those of type #1 are about some individual person.*

Clearly, these are assertions of three distinct logical types--"verb statements", "predicate statements", and "virtue statements". Let us return, however, to our original question, "What values do our children have?" What would count as an answer to this question? To which logical type would the answer belong? Are we asking a question of type #1--"What do our children value?" or are we asking a question of type #3--"What kinds of persons are our children?" Clearly, our question is not of type #2. It is not a question about what things have value.

It should be apparent then that when we ask "What values do our children have?" our question gets translated into something like this:

(i) What kinds of things do they value? or

(ii) What beliefs, attitudes, habits, or affections do our children have? What kinds of persons are they?

These are perfectly legitimate questions to ask. We could even add another:

(iii) How can they come to have different values? or "How can we lead them to have different values?

If we assume that our concern with value and with values in education arises from our desire to shape the values of children, then we shall want to ask this last question. Indeed, it is the question toward which all others lead.

However, it is important--perhaps even of overriding importance--to note that if we confine our attention to claims of type #1 and type #3, then we shall very quickly run up against a barrier. There will be important questions that we cannot ask. For example, provided we limit attention to claims of type #1 and #3, then we will be able to ask how our children may come to have

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*We shall leave it an open question, for the moment, as to whether statements of type #3 can be translated without remainder into statements of type #2 and vice versa. Upon the answer to this question several different theories of moral development may be distinguished.

different values than they presently have, but we shall be unable to ask

(iv) How can they come to have good values?

This is the inescapable question! But the difficulty is that in asking it we are now asking a question not about what values people have, but about what values have worth. We are now asking, whether we like it or not, a question that deals not with what people value, or with what kinds of persons our children are. We are asking a question about what things have worth. In short, this last question is both unavoidable and also unavoidably a question of type #2.

We need to be able to ask questions about what things have worth and what things have more worth than others. If we lived in a world where such questions cannot be asked, then we would live in a world where some of the most important educational questions also could not be asked or could be asked only in very dangerous ways. Depending upon whether we admit such questions to our educational language, whole different educational worlds will emerge. And even if we do admit such questions, different educational worlds will emerge depending upon how we define them.

There was a time when the most basic of all educational questions was constructed by asking how we can educate so that persons will value those things that have worth. But if it is impossible to ask what things have worth independently of what people value, then it is impossible to ask the educational question in this way. An entirely different educational world comes into existence when we rule out questions of type #2 from our educational discourse.

Nevertheless, in a world where questions of that type are inadmissible, we can still ask what people value, what kinds of persons they are and how they can be led to have other values than they already have. And in that kind of world, we would be able to ask these questions not only about saints and sinners of the ordinary kind, but also Nazis, tyrants, barbarians and criminals of all kinds. The trouble is that in such a world we would be

unable to say anything about whose values are better or whether any of their values are good. We could speak only of what they value and what kinds of persons they are.

In such a world, the question as to what things have worth would have to be answered by asking ". . . according to whose values?" We would have to settle upon a group of people and suggest that good values, even educational values, are whatever they value. Should it be the values of whites, businessmen, teachers, scholars, churchmen? Should it be the dominant values of the society? Could we determine what any of these are? But suppose we could decide. The question would remain, who should decide? In the kind of educational world we have been describing, the kind of world in which questions of type #2 are not admitted to educational discourse, the chief feature will be the presence of deep and seious problems of authority. The important point to observe in this pattern of thought is that it represents not a way of answering questions of type #2, but a way of avoiding the need to confront them. It is not another way of raising questions of type #2. It is only what will follow from their consistent evasion.

In this account we have meant to characterize the present educational world. The fact that the problems we have described are the problems that we confront can be taken as evidence that the world we live in is one in which instead of speaking of what has worth or value, we can speak only of what values people have. In this kind of world about the best that evaluation can do is to survey persons' preference on matters of worth. In the practice of evaluation we can survey the attitudes of persons, their opinions, dispositions, and seek means to change them, or lacking that, just report them. But if, in addition, there is the educational task of change, then we have problems of authority, power, who decides, and so forth. Education, in that kind of world, is likely to turn out either to be therapy, manipulation, indoctrination, or simply a blatant exercise of power and compulsion. All of these characterizations have been defended as true in current educational criticism.

But the central point can be discerned in a single example. The statement

(v) A values his education

does not mean the same as

(vi) A's education is valuable, excellent, thorough, etc.

(v) is a type #1 statement, and (vi) is a type #2 statement. But in a world in which type #2 statements are inadmissible, the only reading we can give to (vi) is

(vii) A's education is valuable to him

which means simply that he values it. In short, in such a world, (vi) means the same as (v). That is clearly false. In fact, to suppose that "A values his education" means "A's education is valuable" is not simply false, but absurd. Yet, that is the consequence of a world in which questions of type #2 are not permitted to enter and, therefore, are not permitted to enter into the practice of evaluation. We are left with an educational world in which evaluation is limited to surveying people's values and little else. "How many like twinkies?"

How could such a state of affairs arise? We are making here a difficult point. The central thesis is that in the modern world, the language, therefore the concepts of value or worth, have been transformed by cultural forces and by philosophical amnesia. Can we trace the origins of that transformation?

The notion that people have values, though commonplace in our world, is a distinctly modern and highly ambiguous thought. It is an idea without a history. The idea that things have value (type #2) or that people value things (type #1) is, of course, very old, and we do not intend to deny these elementary facts. Expressions of the form "X has value", "X is worthless", or "X is valuable" have always played a central role in Western thought. But this usage takes the concept of "value" to be a predicate of objects or a property of relations.

We could say that the central problem of classical moral thought was to give an account of what constitutes the good life--what really has worth or value, and how those goods can be

embodied in human life, subject as it is to luck and misfortune. But none of that discussion would make any sense at all were it not for the fact that people value pleasure, wealth, power, security, friendship, intelligence, and so forth. But this usage takes the concept of "value" to be a verb. Valuing is something that human beings do. It is an activity, not something that they have. In our tradition it has always made sense to speak of persons valuing different things (verb), and to speak also of what things have more worth than others (predicate). On such a view it was possible to state the fundamental problem of value in education by asking how it is that we can bring people to value (verb) those things that have worth (predicate).

But these familiar and basic ways of thinking about value do not conform at all to the modern notion of values (plural noun) as a possession of persons. When we speak of people having values we are using a cognate to a verb or a predicate in a way that corresponds neither to its use as a verb nor as a predicate. It is a usage that speaks of the state of human being, not an activity. It speaks of the condition of a human being not the worth of anything presented to that person. It is a distinctly modern idea. It would, in fact, make no sense to a classical thinker to suggest that people have values at all. They may have virtues, knowledge, beliefs, traits (type #3), luck, wealth, pleasure, honor, happiness, or certain dispositions. That they might have values in addition to these, or in contrast to them, is something that just cannot be said from such a point of view. Such a thought can be expressed only from a distinctly modern point of view.

One might advance the view that until early in this century, nobody had values. What they had were beliefs, dispositions, habits, desires, inclinations, sometimes good fortune, and even from time to time a little bit of luck and happiness. It is instructive perhaps to note that at least until the late nineteenth century, no major moral or social thinker in the Western world used the concept of "values" (plural noun) as it is used in modern social science or social commentary or evaluation?

This fact is likely to strike the modern consciousness as odd in the extreme. It is a claim that needs some explanation. How did this conceptual claim develop and what are its consequences for education and for educational evaluation.

Having Values and the Concept of Marginal Utility

One way to grasp how the idea came into the world that people have values is to attend to the powerful emergence in the past one-hundred years of the concept of marginal utility.

The essentials of such a concept are easy to grasp. The consequences are not so easy to grasp. It begins in the notion that value is utility, and that utility of a commodity or anything is something inherent in that thing. The value of water lies in its utility. It resides in the capacity of water to quench thirst, to wash, cleanse and so forth. But the utility of water, its value, is something that resides in the thing itself. It is by virtue of certain natural properties of water that it has such utility. It would have such utility even though there were no persons using it. The utility of water arises from its natural properties. Those properties are the roots of its value. They constitute, as it were, the use-value of water and they are implicit in the character of the thing itself. That is one view.

But, of course, there are circumstances in which water is scarce and others in which it is abundant. Where it is scarce some persons who have it may ask others who want it to pay a price. They may ask something in exchange for the acquisition of the use value of water. In short, they may ask a price for it. Thus, water has not only a use value, a worth implicit in its very nature, but it also have exchange value, and the exchange value is whatever a unit of water is able to secure in exchange for some other goods.

Now if we view the matter in this way, then a question arises. In addition to its use value, a commodity has an exchange value. The exchange value is its price. How can we determine a fair price for any good? Clearly, a "fair price" should be related to

use value, i.e., inherent value. We might say that the exchange value of any commodity, any exchangeable thing in the world, should be related in some way to its utility, its use value. But how?

Economists in the early nineteenth century struggled with this problem and came up with essentially two answers. The first is that the exchange value of a good should be determined by calculating the number of "utils" (amount of utility) that constitutes its inherent worth. That is to say, a sweater in a cold climate has more utils than a sweater in a temperate climate. Having more utils, it has more value, and, therefore, it can and should command a greater exchange value or price. The second view was that the price of a commodity is a function of the effort needed to produce it. Hence, value is viewed not as some natural property of utility embodied in the object, but as the amount of labor needed to produce it. Hence, the labor theory of value.

This problem of relating price to use value or utility was examined, twisted, and wrung dry without notable advancement from Adam Smith to Karl Marx. But with the neo-classical economists, and especially in the work of Jevons and Marshall, the problem was given a substantially different formulation in the theory of "the final degree of utility". What is that view?

We shall give the idea two, logically equivalent definitions. Here is the first. We are unlikely to find anything surprising in the claim that a person who has an entire garage full of bread is unlikely to exercise great concern over getting one more. But neither would we be surprised that a person who has none at all is likely to place a great deal of importance on getting one. Hence, the next loaf of bread is likely to be valued highly by the one and not highly at all by the other. Indeed, we would find nothing surprising in the claim that a person who has none and, therefore, values the next loaf highly, is likely to value the next loaf less highly after he manages to store a few away. Hence, the value of a loaf of bread, or any other good, is a function of the stock of that good that one already has. The marginal utility of any good then is always defined as the value

of the next unit of some commodity in relation to the stock of it that one already possesses. The next five dollars is likely to be valued highly by a person who has few and is likely to be viewed as a matter of frivolity to a person who already has millions. Its value is its marginal utility, not its inherent utility, and it tends always to be determined by the amount of that good that one already possesses.

But there is a second way of defining marginal utility. We can say that the marginal utility of any good is the amount of some other good that one is willing to exchange for the next increment. To say that the value of the next incremental loaf is slight for the person who already has a thousand is to say that that person is unlikely to give up much of anything in order to get the next loaf. And to say that the next loaf has larger marginal utility for the person who has none is to say that that person is likely to give up a great deal of some other good in order to get the next incremental loaf. Thus, we may produce a logically equivalent definition of marginal utility by noting that the marginal utility of anything is the amount of some <u>other</u> good that one is willing and able to give up, for the next increment. Marginal utility then, is the rate of exchange.

Clearly, under these definitions, by introducing the idea of marginal utility we have been able to see that the value of any object <u>is</u> its price. Price now becomes the <u>measure</u> of value. Use value and exchange value come to be united.

But to see the beauty of this transformation and its importance for problems of evaluation, we need to take just one more step. It is important to note that the concept of marginal utility is always defined as utility <u>to someone</u> or <u>to</u> some aggregate of individuals. It is not a property of any good or commodity in itself. It turns out, by this analysis of value, that there is no such thing as the inherent value of anything. There is only its value <u>to</u> some individual. If value is utility, and if utility is marginal, then value is always the value of X <u>to</u> some individual. Thus, we can purchase a powerful view of consumer behavior by giving up the view that <u>things</u> have value.

(We give up type #2 claims.) In doing so it becomes possible to speak instead of people having values, by which is meant simply that they have different individual calculations of marginal utility.

One may be pardoned for entertaining the suspicion that the logic of such a view is impregnably circular. But such suspicion can in no way detract from the significance of such a conceptual shift in the conception of value for the development of economics or from the claim that it is a pattern of thought indelibly stamped upon the culture of the modern world, and thus, upon the practice of evaluation. A world in which value is understood as marginal utility is a world in which nothing is presented to us as valuable in and of itself. It is a world in which it is increasingly difficult to speak of the worth of things. Instead, it becomes natural and easy to say that nothing has worth of itself, value is not something presented to us by our experience in the world. Rather, all we can speak of is the values or persons, by which is meant the fact that each of us has his or hew own calculation of marginal utility. Nothing has value except as it has value to this or that person.

In such circumstances, we can no longer formulate the most fundamental educational question by asking how persons can be led to value (verb) those things that have worth (predicate) because nothing can be construed to have worth except to some other individual. The most fundamental of all educational questions now comes to be redefined. We must ask instead, "How can we get people to have good (?) values?" and "Whose values are we to inclucate?" and "Who is to decide?" We have, then, problems of authority, difficulties with indoctrination, and questions concerning by what right we insist on the power to "muck around" with children's preferences.

Thus, we can understand why it is that to ask questions about people's values is not yet to address the question of what has worth. To transform the concept of marginal utility into a cultural presupposition would be to create the kind of world from which value, including educational value, has been evacuated. If

we can no longer speak of what has value in such a world, only of what has marginal utility to this or that person or group of persons, if we are permitted only to speak of persons' values, then it should not surprise us that educational evaluation will have difficulty addressing the problem of evaluating the educational worth of things. We would have to replace all such discourse by discourse about what contributes to the formation and the alteration of persons' values. Besides creating a condition of crisis in educational authority, what other implications flow from such a view of value of having values?

In order to see the prima facie inadequacy of such a state of affairs, one need only recall the familiar saying, "He knows the price of everything and the value of nothing." That is an accurate account of anyone who truly inhabits the limited world in which value is defined as marginal utility. That would be a world in which statements of type ¢2 are denied entry into educational discourse.

Another Value Question: The Virtue-Function Analysis

In Part I (see page 18), we distinguished five different kinds of value claims and their corresponding questions. In this brief note we wish to suggest a sixth that may be both discrete from the others and useful in the context of evaluation. We shall refer to it as the virtue/function claim.

6. The virtue/function claim

Is A a good X?	Is Head Start a good compensatory education program?
If A is a good X, then by virtue of what y, is A a good X?	If Head Start is a good compensatory education program, then by virtue of what characteristic is it a good program of that kind?
	What are the virtues of a compensatory program?

The impact of the virtue/function claim is to add to the array of questions useful in applying QUEMAC in analyzing an evaluation

document. The underlying question is this: "Is A a good one of its kind?" The effect of asking this question is first, that it forces us to classify the object of evaluation. We must be prepared to specify what kind of thing it is. But secondly, this question also obliges us to specify the characteristics that make the object of evaluation a good representative of its kind.

Thus, much depends upon whether we conceive of Head Start as a compensatory program, an early childhood program, or a program for child care. These are different kinds of things. Excellence of one kind may be different from excellence of another kind. We would say, from within the philosophical tradition, that whether Head Start is a good program of one kind would require a different set of virtues that would be required if it is a good program of a different kind.

But this reference to "virtue" deserves some explanation. The underlying idea stems from Greek. In the Greek language, the word that we slovenly translate as "virtue" is arete. In colloquial English, the word "virtue" carries with it moral connotations that the word arete does not have. Arete means simply "excellence". Everything has its arete. The arete of a knife is to cut. But the arete of a surgeon's knife is to be small, light, and to cut cleanly with little pressure. A cleaver is also a knife, but its arete is heaviness, thickness, and balance, as well as sharpness. Their arete is different because their function is different. Arete, then, is excellence always in relation to function, which is to say, in relation to kind.

The arete, that is the virtue, of a race horse is speed. But the arete of a quarter horse is the ability to attain full speed suddenly. The arete of a cutting horse is agility in all directions, as well as a quite specifiable kind of intelligence. The arete of a draft horse is strength. Each time we specify a different kind, there will be a different set of virtues, a different arete, corresponding to that difference in kind.

So there are two things to note about this underlying thought. The first is that the concept of "virtue"--or arete--is not a moral concept, even though it is a concept of value. It means simply

"excellence"; but secondly it means always "excellence in relation to function". If we ask whether A is a good X, and answer "Yes", then we must be prepared to say "by virtue of (literally) what Y is it a good X--that is to say, "by what virtues" is it a good X?

A Concluding Note:

Two points are important. First is the fact that the virtue/function claim is, at the same time, the most general and the most specific of all the value claims that we have distinguished. It is the most general in one respect because it has the widest range of application. The virtue/function value claim is relevant to evaluation of an educational program, pedagogy, plan, text, or even in reviewing a book. It is a central value question for evaluations and evaluation reports, and even for the evaluation of evaluators themselves. In such case we can ask "Is A a good X?"

But the virtue/function set of questions will also be decisive in determining which of the other kinds of value claims will be relevant in examining an evaluation document. That is to say, when we respond to the virtue/function value question, we will be determining whether, from that point onward, the relevant problems are the claims of instrumental value, intrinsic value, comparative value, decision, or idealization. In short, the virtue/function value claim is the one that determines which of the other kinds of value claims are most relevant to making the philosophy of the evaluation document explicit.

But the virtue/function claim, aside from these powerful generalities, is also the most specific of the value claims. It is the most specific because it is the one that requires the most detailed specification. It requires us to identify the virtues that are relevant, and that specification almost always requires a concrete level of illustration and reflection. It requires detailed philosophical analysis, in other words.

But there is a second point to note. Both in discussing the nature of educational value or worth and in exploring the meaning

of "having values" it may seem that we have been advancing the claim that value is relative. And that would be a correct impression. The nature of the virtue/function value claim seems to reinforce that view. But it is equally important to note that at the same time that we have been advancing the view that value is relative, we have been arguing against the view that value is subjective.

The virtue/function value claim should help us to see this point. Arete is always excellence in relation to function. But nobody should confuse this claim with the very different assertion that value (or excellence, virtue) is subjective, or that value is to be understood simply as an expression of the subjectively different marginal utility schedules (preferences, dispositions, inclinations) of individuals. Whether any given educational object has educational worth is a fact that is relative to individuals. Nevertheless, educational value is objectively present or absent, relevant or irrelevant. Virtue is relative, but not subjective. It is relative to individuals, but not an expression of preferences, likes, or aversions.

Yet, in another sense, virtue (read "excellence" or "value") is always the same. It is always excellence in relation to function. We may ask "What is a good evaluator?" The answer will be that a good evaluator is one who exercises the virtues of an evaluator. We may ask "What is a good historian?" The answer is that a good historian is one who exercises the virtues of an historian. In a precisely similar way we can ask "What is a good human being?" The answer, though more general and more difficult, is no more subjective than the others. It is that a good human being is one who exercises the virtues of being human, i.e., those excellences that are appropriate to a good representative of that kind. The answer is to be found, then, in the study of a subject called anthropology--the study of human-kind. It follows that if the study of history has educative value, then, by the virtue/function question, it has educative value because it assists us in acquiring a memory--which is one of the powers inherent in what it means to be a good representative of a certain kind, viz.,

human-kind. That is to say, if A is a good X (where X is human-kind), then A is a good X partly in virtue of the fact that A has a social memory, because having such a memory is one of the human virtues. This claim may be true. It may be false. But there is nothing subjective about it. Although there is something relative to the individual involved in the claim that any particular path is a good way toward the acquisition or cultivation of that virtue, nevertheless, there is nothing subjective about the claim. It will not be evaluated by eliciting persons' preferences in the matter.

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